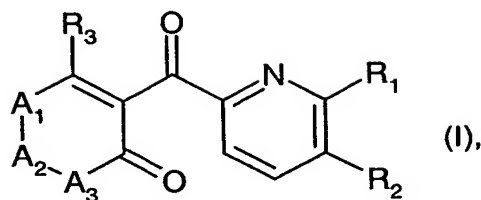


What is claimed is:

## 1. A compound of formula I



wherein

R<sub>1</sub> is -L<sub>10</sub>-R<sub>4</sub>, -L<sub>11</sub>-X<sub>1</sub>-R<sub>5</sub>, -NR<sub>6</sub>R<sub>7</sub>, -X<sub>2</sub>-R<sub>8</sub> or -X<sub>3</sub>-L<sub>1</sub>-R<sub>9</sub>;

L<sub>2</sub>, L<sub>4</sub>, L<sub>6</sub> and L<sub>8</sub> are each independently of the others C<sub>1</sub>-C<sub>4</sub>alkylene which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy and to which C<sub>1</sub>-C<sub>4</sub>alkylene group there may additionally be spirocyclically bound a C<sub>2</sub>-C<sub>5</sub>alkylene group, and wherein that C<sub>2</sub>-C<sub>5</sub>alkylene group may in turn be interrupted once or twice by oxygen, sulfur, sulfinyl or by sulfonyl and/or substituted by C<sub>1</sub>-C<sub>4</sub>alkyl or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

L<sub>3</sub>, L<sub>5</sub>, L<sub>7</sub> and L<sub>9</sub> are each independently of the others C<sub>1</sub>-C<sub>4</sub>alkylene which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

R<sub>2</sub> is halogen, C<sub>1</sub>-C<sub>4</sub>haloalkyl, cyano, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>4</sub>alkylthio, C<sub>1</sub>-C<sub>4</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub>haloalkylthio, C<sub>1</sub>-C<sub>4</sub>haloalkylsulfinyl or C<sub>1</sub>-C<sub>4</sub>haloalkylsulfonyl;

L<sub>10</sub> is a direct bond or a C<sub>1</sub>-C<sub>6</sub>alkylene, C<sub>2</sub>-C<sub>6</sub>alkenylene or C<sub>2</sub>-C<sub>6</sub>alkynylene group which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>cycloalkyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy or by C<sub>1</sub>-C<sub>2</sub>alkylsulfonyloxy;

R<sub>4</sub> is halogen, cyano, rhodano, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>3</sub>-C<sub>6</sub>alkenyloxycarbonyl, C<sub>3</sub>-C<sub>6</sub>alkynyloxycarbonyl, benzyloxycarbonyl, C(O)NR<sub>25a</sub>R<sub>26a</sub>, formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylcarbonyl, C<sub>1</sub>-C<sub>4</sub>alkoxy-C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>4</sub>alkoxy-C<sub>1</sub>-C<sub>4</sub>alkoxy-C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl, N-(C<sub>1</sub>-C<sub>4</sub>alkyl)-C<sub>1</sub>-C<sub>4</sub>alkylsulfonylamino-C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyloxy or phenylsulfonyloxy, wherein the phenyl groups may be substituted by one or more C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or nitro groups;

or R<sub>4</sub> is a three- to ten-membered, monocyclic or fused bicyclic ring system which may be aromatic, saturated or partially saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, and wherein the ring system may contain not more than 2 oxygen atoms and not more than two sulfur atoms, and each ring system may

itself be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>4</sub>alkoxy-C<sub>1</sub>-C<sub>2</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, hydroxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, mercapto, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>3</sub>-C<sub>6</sub>alkenylthio, C<sub>3</sub>-C<sub>6</sub>haloalkenylthio, C<sub>3</sub>-C<sub>6</sub>alkynylthio, C<sub>2</sub>-C<sub>5</sub>alkoxy-alkylthio, C<sub>3</sub>-C<sub>5</sub>acetylalkylthio, C<sub>3</sub>-C<sub>6</sub>alkoxycarbonylalkylthio, C<sub>2</sub>-C<sub>4</sub>cyanoalkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, di(C<sub>1</sub>-C<sub>2</sub>alkyl)aminosulfonyl, di(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, halogen, cyano, nitro, phenyl or by benzylthio, and wherein phenyl and benzylthio may in turn be substituted on the phenyl ring by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro, and wherein the substituent on the nitrogen in the heterocyclic ring are other than halogen;

or R<sub>4</sub> is hydrogen when L<sub>10</sub> is a C<sub>1</sub>-C<sub>6</sub>alkylene group which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl or by halogen; or when L<sub>10</sub> is a C<sub>2</sub>-C<sub>6</sub>alkenylene or C<sub>2</sub>-C<sub>6</sub>alkynylene group which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>cycloalkyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy or by C<sub>1</sub>-C<sub>2</sub>alkylsulfonyloxy;

R<sub>25a</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>26a</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>25a</sub> together with R<sub>26a</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

L<sub>11</sub> is a C<sub>1</sub>-C<sub>6</sub>alkylene, C<sub>2</sub>-C<sub>6</sub>alkenylene or C<sub>2</sub>-C<sub>6</sub>alkynylene group which may be substituted once, twice or three times by halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>cycloalkyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy or by C<sub>1</sub>-C<sub>2</sub>alkylsulfonyloxy;

X<sub>1</sub> is oxygen, -OC(O)-, -C(O)-, -C(=NR<sub>14a</sub>)-, -C(O)O-, -C(O)NR<sub>14b</sub>-, -OC(O)O-, -N(R<sub>10</sub>)-O-, -O-NR<sub>11</sub>-, thio, sulfinyl, sulfonyl, -SO<sub>2</sub>NR<sub>12</sub>-, -NR<sub>13</sub>SO<sub>2</sub>-, -N(SO<sub>2</sub>R<sub>14c</sub>)-, -N(R<sub>14d</sub>)C(O)- or -NR<sub>14</sub>-;

R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub>, R<sub>13</sub>, R<sub>14b</sub>, R<sub>14d</sub> and R<sub>14</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl,

or C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl substituted by C<sub>1</sub>-C<sub>6</sub>alkoxy, or benzyl or phenyl, wherein phenyl and benzyl may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro;

R<sub>14a</sub> is hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy or benzyloxy;

R<sub>14c</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl;

R<sub>5</sub> is hydrogen or a C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>3</sub>-C<sub>8</sub>alkenyl or C<sub>3</sub>-C<sub>8</sub>alkynyl or C<sub>3</sub>-C<sub>6</sub>cycloalkyl group which may be substituted once, twice or three times by chlorine, bromine, iodine, hydroxy, amino, formyl, nitro, cyano, mercapto, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, halo-substituted C<sub>3</sub>-C<sub>6</sub>cycloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>haloalkenyloxy, cyano-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl-sulfinyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, phenylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, benzyl-oxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylamino, di(C<sub>1</sub>-C<sub>6</sub>alkyl)amino, R<sub>15a</sub>C(X<sub>23</sub>)N(R<sub>18a</sub>)-, R<sub>16a</sub>N(R<sub>17a</sub>)C(X<sub>24</sub>)-, R<sub>16b</sub>N(R<sub>17b</sub>)C(X<sub>25</sub>)NR<sub>18b</sub>-, R<sub>15c</sub>SO<sub>2</sub>N(R<sub>18c</sub>)-, R<sub>16c</sub>N(R<sub>17c</sub>)C(X<sub>26</sub>)O-, R<sub>15b</sub>C(X<sub>27</sub>)O-, R<sub>19</sub>R<sub>20</sub>C=NO-, R<sub>15</sub>S(O)<sub>2</sub>O-, R<sub>16</sub>N(R<sub>17</sub>)SO<sub>2</sub>-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl or by phenylsulfonyl or which may be substituted from one to seventeen times by fluorine; wherein the phenyl- or benzyl-containing groups may in turn be substituted by one or more C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or nitro groups;

R<sub>15a</sub>, R<sub>15b</sub> and R<sub>15c</sub> are hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, benzyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy or benzyloxy, wherein the phenyl groups may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro;

R<sub>16a</sub>, R<sub>16b</sub> and R<sub>16c</sub> are hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl or phenyl, wherein phenyl may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro;

R<sub>17a</sub>, R<sub>17b</sub>, R<sub>17c</sub>, R<sub>18a</sub>, R<sub>18b</sub> and R<sub>18c</sub> are hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

X<sub>23</sub>, X<sub>24</sub>, X<sub>25</sub>, X<sub>26</sub> and X<sub>27</sub> are oxygen or sulfur;

R<sub>15</sub>, R<sub>16</sub>, R<sub>17</sub>, R<sub>19</sub> and R<sub>20</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl, or C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl substituted by C<sub>1</sub>-C<sub>6</sub>alkoxy, or benzyl or phenyl, wherein phenyl and

benzyl may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro;  
 or R<sub>5</sub> is a three- to ten-membered monocyclic or fused bicyclic ring system which may be aromatic, saturated or partially saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur, and wherein the ring system is bound to the substituent X<sub>1</sub> directly or via a C<sub>1</sub>-C<sub>4</sub>alkylene, C<sub>2</sub>-C<sub>4</sub>alkenylene, C<sub>2</sub>-C<sub>4</sub>alkynylene, -N(R<sub>18</sub>)-C<sub>1</sub>-C<sub>4</sub>alkylene, -O-C<sub>1</sub>-C<sub>4</sub>alkylene, -S-C<sub>1</sub>-C<sub>4</sub>alkylene, -S(O)-C<sub>1</sub>-C<sub>4</sub>alkylene or -SO<sub>2</sub>-C<sub>1</sub>-C<sub>4</sub>alkylene chain, wherein the ring system may not be interrupted by -C(=O)-, -C(=S)-, -C(=NR<sub>5a</sub>)-, -N(=O)-, -S(=O)- or by -SO<sub>2</sub>-, and each ring system may contain not more than 2 oxygen atoms and not more than two sulfur atoms, and the ring system itself may be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, hydroxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, mercapto, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>3</sub>-C<sub>6</sub>alkenylthio, C<sub>3</sub>-C<sub>6</sub>haloalkenylthio, C<sub>3</sub>-C<sub>6</sub>alkynylthio, C<sub>2</sub>-C<sub>5</sub>alkoxyalkylthio, C<sub>3</sub>-C<sub>5</sub>acetylalkylthio, C<sub>3</sub>-C<sub>6</sub>alkoxycarbonylalkylthio, C<sub>2</sub>-C<sub>4</sub>-cyanoalkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, di(C<sub>1</sub>-C<sub>2</sub>alkyl)aminosulfonyl, di(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, halogen, cyano, nitro, phenyl or by benzylthio, wherein phenyl and benzylthio may in turn be substituted on the phenyl ring by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro, and wherein the substituents on the nitrogen in the heterocyclic ring are other than halogen;

R<sub>5a</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, cyano or nitro;

R<sub>18</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl, or C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl substituted by C<sub>1</sub>-C<sub>6</sub>alkoxy, or benzyl or phenyl, wherein phenyl and benzyl may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro;

R<sub>6</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, -C(O)R<sub>19a</sub> or -C(S)R<sub>20a</sub>;

R<sub>19a</sub> and R<sub>20a</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, benzyl, heteroaryl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, benzyloxy, C<sub>1</sub>-C<sub>4</sub>alkylthio or a group NR<sub>21</sub>R<sub>22</sub>;

R<sub>21</sub> and R<sub>22</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl, and wherein phenyl, benzyl, benzyloxy and heteroaryl in R<sub>19a</sub>, R<sub>20a</sub>,

$R_{21}$  and  $R_{22}$  may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino; or  $R_{21}$  together with  $R_{22}$  and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino; or  $R_6$  is  $-L_2-X_4-R_{24}$ ; wherein

$X_4$  is oxygen,  $-NR_{23}-$ ,  $-S-$ ,  $-S(O)-$  or  $-S(O)_2-$ ;

$R_{23}$  is hydrogen,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl or is phenyl which may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

$R_{24}$  is hydrogen or a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkoxy,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl, cyano,  $C(X_5)NR_{25}R_{26}$ ,  $C_3$ - $C_6$ cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

or  $R_{24}$  is  $C(O)-R_{74}$  or  $C(S)-R_{75}$ ;

$X_5$  is oxygen or sulfur;

$R_{25}$  is hydrogen,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl or phenyl which may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

$R_{26}$  is hydrogen,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl;

or  $R_{25}$  together with  $R_{26}$  and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or

substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>6</sub> is -L<sub>3</sub>-R<sub>27</sub>;

R<sub>27</sub> is formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>cycloalkylcarbonyl, benzoyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, cyano, C(X<sub>6</sub>)NR<sub>28</sub>R<sub>29</sub>, phenyl or heteroaryl, wherein benzoyl and phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

and wherein heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl;

or R<sub>27</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl or C<sub>5</sub>-C<sub>6</sub>cycloalkenyl each of which may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

X<sub>6</sub> is oxygen or sulfur;

R<sub>28</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>29</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>28</sub> together with R<sub>29</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>7</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, benzyl, heteroaryl, C(X<sub>7</sub>)R<sub>30</sub> or NR<sub>33</sub>R<sub>34</sub>, wherein phenyl, benzyl and heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>7</sub> is oxygen or sulfur;

R<sub>30</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, heteroaryl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyl-oxo, benzyloxy, C<sub>1</sub>-C<sub>4</sub>alkylthio or a group NR<sub>31</sub>R<sub>32</sub>;

R<sub>31</sub> and R<sub>33</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>32</sub> and R<sub>34</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>31</sub> together with R<sub>32</sub> or R<sub>33</sub> together with R<sub>34</sub>, in each case with the respective N atom to which they are bonded, form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>7</sub> is -L<sub>4</sub>-X<sub>8</sub>-R<sub>35</sub>; wherein

X<sub>8</sub> is oxygen, -NR<sub>36</sub>-, -S-, -S(O)- or -S(O)<sub>2</sub>-;

R<sub>36</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or is phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>35</sub> is hydrogen or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, cyano, C(X<sub>9</sub>)NR<sub>37</sub>R<sub>38</sub>, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>9</sub> is oxygen or sulfur;

R<sub>37</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>halo-

alkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>38</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>37</sub> together with R<sub>38</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>7</sub> is -L<sub>5</sub>-R<sub>39</sub>;

R<sub>39</sub> is formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>cycloalkylcarbonyl, benzoyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, cyano, C(X<sub>10</sub>)NR<sub>40</sub>R<sub>41</sub>, phenyl or heteroaryl, wherein benzoyl and phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

and wherein heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl;

or R<sub>39</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl or C<sub>5</sub>-C<sub>6</sub>cycloalkenyl each of which may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

X<sub>10</sub> is oxygen or sulfur;

R<sub>40</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>41</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>40</sub> together with R<sub>41</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>6</sub> and R<sub>7</sub> together with the nitrogen atom to which they are bonded form a carbocyclic 3- to 7-membered, saturated or partially saturated or unsaturated monocyclic or bicyclic ring system which may be interrupted once by oxygen, once by sulfur, from one to three times by nitrogen and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl,



C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>-haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl; wherein each ring system may not be interrupted by -C(=O)-, -C(=S)-, -C(=NR<sub>5a</sub>)-, -N(=O)-, -S(=O)- or by -SO<sub>2</sub>-;

R<sub>5a</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, cyano or nitro;

X<sub>2</sub> is oxygen, -NR<sub>42</sub>-, sulfur, -S(O)- or -S(O)<sub>2</sub>-;

R<sub>42</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, heteroaryl, C(X<sub>11</sub>)R<sub>43</sub> or NR<sub>46</sub>R<sub>47</sub>;

X<sub>11</sub> is oxygen or sulfur;

R<sub>43</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, heteroaryl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyl-oxy, benzyloxy, C<sub>1</sub>-C<sub>4</sub>alkylthio or a group NR<sub>44</sub>R<sub>45</sub>;

R<sub>44</sub> and R<sub>46</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkyl-carbonylamino;

R<sub>45</sub> and R<sub>47</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>44</sub> together with R<sub>45</sub> or R<sub>46</sub> together with R<sub>47</sub>, in each case with the respective N atom to which they are bonded, form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>42</sub> is -L<sub>6</sub>-X<sub>12</sub>-R<sub>48</sub>; wherein

X<sub>12</sub> is oxygen, -NR<sub>49</sub>-, -S-, -S(O)- or -S(O)<sub>2</sub>-;

R<sub>49</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or is phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>48</sub> is a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>alkoxy-C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, cyano, C(X<sub>13</sub>)NR<sub>50</sub>R<sub>51</sub>, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, wherein heteroaryl or heteroaryloxy may in turn be interrupted once by

oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>13</sub> is oxygen or sulfur;

R<sub>50</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>51</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>50</sub> together with R<sub>51</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>42</sub> is -L<sub>7</sub>-R<sub>52</sub>;

R<sub>52</sub> is formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>cycloalkylcarbonyl, benzoyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, cyano, C(X<sub>14</sub>)NR<sub>53</sub>R<sub>54</sub>, phenyl or heteroaryl, wherein benzoyl and phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

and wherein heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl;

or R<sub>52</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl or C<sub>5</sub>-C<sub>6</sub>cycloalkenyl each of which may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

X<sub>14</sub> is oxygen or sulfur;

R<sub>53</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>54</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>53</sub> together with R<sub>54</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>8</sub> is hydrogen or a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>alkoxy-C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, cyano, C(X<sub>15</sub>)NR<sub>55</sub>R<sub>56</sub>, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, and wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>15</sub> is oxygen or sulfur;

R<sub>55</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>56</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>55</sub> together with R<sub>56</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>8</sub> is cyano, C(O)-R<sub>76</sub> or C(S)-R<sub>77</sub>;

X<sub>3</sub> is oxygen, -NR<sub>57</sub>-, sulfur, -S(O)- or -S(O)<sub>2</sub>-;

R<sub>57</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, heteroaryl, C(X<sub>16</sub>)R<sub>58</sub> or NR<sub>61</sub>R<sub>62</sub>;

X<sub>16</sub> is oxygen or sulfur;

R<sub>58</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, heteroaryl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyl-oxy, benzyloxy, C<sub>1</sub>-C<sub>4</sub>alkylthio or a group NR<sub>59</sub>R<sub>60</sub>;

R<sub>59</sub> and R<sub>61</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>60</sub> and R<sub>62</sub> are each independently of the other hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>59</sub> together with R<sub>60</sub> or R<sub>61</sub> together with R<sub>62</sub>, in each case with the respective N atom to which they are bonded, form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>57</sub> is -L<sub>8</sub>-X<sub>17</sub>-R<sub>63</sub>; wherein

X<sub>17</sub> is oxygen, -NR<sub>64</sub>-, -S-, -S(O)- or -S(O)<sub>2</sub>-;

R<sub>64</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or is phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>63</sub> is a C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>alkoxy-C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, cyano, C(X<sub>18</sub>)NR<sub>65</sub>R<sub>66</sub>, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>18</sub> is oxygen or sulfur;

R<sub>65</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>halo-

alkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>66</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>65</sub> together with R<sub>66</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>57</sub> is -L<sub>9</sub>-R<sub>67</sub>;

R<sub>67</sub> is formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>cycloalkylcarbonyl, benzoyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, cyano, C(X<sub>19</sub>)NR<sub>68</sub>R<sub>69</sub>, phenyl or heteroaryl, wherein benzoyl and phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

and wherein heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl; or R<sub>67</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl or C<sub>5</sub>-C<sub>6</sub>cycloalkenyl each of which may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

X<sub>19</sub> is oxygen or sulfur;

R<sub>68</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>69</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>68</sub> together with R<sub>69</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

L<sub>1</sub> is C<sub>1</sub>-C<sub>4</sub>alkylene which may be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy and to which C<sub>1</sub>-C<sub>4</sub>alkylene group there may be spirocyclically bound a further C<sub>2</sub>-C<sub>5</sub>alkylene group which may in turn be interrupted once or twice by oxygen, sulfur, sulfinyl or by sulfonyl and/or substituted by C<sub>1</sub>-C<sub>4</sub>alkyl or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

or  $L_1$  is  $C_1$ - $C_4$ alkylene which may be substituted once, twice or three times by  $C_1$ - $C_4$ alkyl, halogen or by  $C_1$ - $C_4$ alkoxy, and wherein a carbon atom of that  $C_1$ - $C_4$ alkylene group together with  $R_9$  or with  $R_{70}$  forms, by means of a further  $C_2$ - $C_6$ alkylene chain, a ring system which may additionally be interrupted once or twice by oxygen, sulfur, sulfinyl or by sulfonyl and/or substituted by  $C_1$ - $C_4$ alkyl or by  $C_1$ - $C_4$ alkoxy;  $R_9$  is a group  $-X_{20}-R_{70}$ , wherein

$X_{20}$  is oxygen,  $-NR_{71}-$ ,  $-S-$ ,  $-S(O)-$  or  $-S(O)_2-$ ;

$R_{71}$  is hydrogen or a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkoxy,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl, cyano,  $C(X_{21})NR_{72}R_{73}$ ,  $C_3$ - $C_6$ cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may be bonded to the  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

$X_{21}$  is oxygen or sulfur;

$R_{72}$  is hydrogen,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl or phenyl which may be substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

$R_{73}$  is hydrogen,  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl;

or  $R_{72}$  together with  $R_{73}$  and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy,  $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylsulfinyl,  $C_1$ - $C_3$ alkylsulfonyl,  $C_1$ - $C_3$ haloalkylthio, cyano, nitro,  $C_1$ - $C_4$ alkoxycarbonyl or by  $C_1$ - $C_4$ alkylcarbonylamino;

$R_{70}$  is hydrogen or a  $C_1$ - $C_6$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group, which groups may be substituted once, twice or three times by halogen, hydroxy,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkoxy,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl, cyano,  $C(X_{15a})NR_{55a}R_{56a}$ ,  $C_3$ - $C_6$ cycloalkyl, phenyl, phenoxy or by 5- or 6-membered heteroaryl or heteroaryloxy, and wherein heteroaryl or heteroaryloxy may in turn be interrupted once by oxygen or by sulfur or once, twice or three times by nitrogen and may

be bonded to the C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group either *via* a C atom or *via* a N atom, and wherein the phenyl- and heteroaryl-containing groups may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

X<sub>15a</sub> is oxygen or sulfur;

R<sub>55a</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>56a</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>55a</sub> together with R<sub>56a</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>70</sub> is C<sub>1</sub>-C<sub>10</sub>alkylideneimino, (phenyl-C<sub>1</sub>-C<sub>4</sub>alkylidene)imino, or phenyl, wherein phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

or R<sub>70</sub> is cyano, C(O)-R<sub>78</sub> or C(S)-R<sub>79</sub>;

or R<sub>9</sub> is formyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>3</sub>-C<sub>6</sub>cycloalkylcarbonyl, benzoyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, cyano, C(X<sub>35</sub>)NR<sub>125</sub>R<sub>126</sub>, phenyl or heteroaryl, wherein benzoyl and phenyl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

and wherein heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro or by C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl;

or R<sub>9</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl or C<sub>5</sub>-C<sub>6</sub>cycloalkenyl each of which may in turn be substituted once, twice or three times by C<sub>1</sub>-C<sub>4</sub>alkyl, halogen or by C<sub>1</sub>-C<sub>4</sub>alkoxy;

X<sub>35</sub> is oxygen or sulfur;

R<sub>125</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy,

C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>126</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>125</sub> together with R<sub>126</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>74</sub>, R<sub>75</sub>, R<sub>76</sub>, R<sub>77</sub>, R<sub>78</sub> and R<sub>79</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, phenyl, benzyl, heteroaryl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, benzyloxy, C<sub>1</sub>-C<sub>4</sub>alkylthio or NR<sub>127</sub>R<sub>128</sub>, wherein phenyl, benzyl or heteroaryl may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>127</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl or phenyl which may be substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>128</sub> is hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl;

or R<sub>127</sub> together with R<sub>128</sub> and the respective N atom to which they are bonded form a carbocyclic 3- to 6-membered ring which may be interrupted by oxygen or by sulfur and/or substituted once, twice or three times by halogen, C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>1</sub>-C<sub>4</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>3</sub>haloalkylthio, cyano, nitro, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl or by C<sub>1</sub>-C<sub>4</sub>alkylcarbonylamino;

R<sub>3</sub> is hydroxy, O<sup>-</sup>M<sup>+</sup> wherein M<sup>+</sup> is a metal cation or an ammonium cation, or is halogen or S(O)<sub>p</sub>R<sub>80</sub>, wherein

p is 0, 1 or 2;

R<sub>80</sub> is C<sub>1</sub>-C<sub>12</sub>alkyl, C<sub>2</sub>-C<sub>12</sub>alkenyl, C<sub>2</sub>-C<sub>12</sub>alkynyl, C<sub>3</sub>-C<sub>12</sub>allenyl, C<sub>3</sub>-C<sub>12</sub>cycloalkyl or C<sub>5</sub>-C<sub>12</sub>-cycloalkenyl;

or R<sub>80</sub> is R<sub>121</sub>-C<sub>1</sub>-C<sub>12</sub>alkylene or R<sub>122</sub>-C<sub>2</sub>-C<sub>12</sub>alkenylene, wherein the alkylene or alkenylene chain may be interrupted by -O-, -S-, -S(O)-, -SO<sub>2</sub>- or by -C(O)- and/or substituted from one to five times by R<sub>123</sub>;

or R<sub>80</sub> is phenyl which may be substituted once, twice, three times, four times or five times by R<sub>124</sub>;



$R_{121}$  and  $R_{122}$  are each independently of the other halogen, cyano, rhodano, hydroxy,  $C_1$ - $C_6$ alkoxy,  $C_2$ - $C_6$ alkenyloxy,  $C_2$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_2$ - $C_6$ alkenylthio,  $C_2$ - $C_6$ alkynylthio,  $C_1$ - $C_6$ alkylsulfonyloxy, phenylsulfonyloxy,  $C_1$ - $C_6$ alkylcarbonyloxy, benzoyloxy,  $C_1$ - $C_4$ alkoxycarbonyloxy,  $C_1$ - $C_6$ alkylcarbonyl,  $C_1$ - $C_4$ alkoxy-carbonyl, benzoyl, aminocarbonyl,  $C_1$ - $C_4$ alkylaminocarbonyl,  $C_3$ - $C_6$ cycloalkyl, phenyl, phenoxy, phenylthio, phenylsulfinyl or phenylsulfonyl, wherein the phenyl-containing groups may in turn be substituted once, twice or three times by halogen,  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ haloalkyl, hydroxy,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy, cyano or by nitro;

$R_{123}$  is hydroxy, halogen,  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl, cyano, carbamoyl, carboxy,  $C_1$ - $C_4$ alkoxycarbonyl or phenyl, wherein phenyl may be substituted once, twice or three times by hydrogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_3$ - $C_4$ alkenyl,  $C_3$ - $C_4$ alkynyl or by  $C_1$ - $C_4$ alkoxy;

$R_{124}$  is halogen,  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ haloalkyl, hydroxy,  $C_1$ - $C_3$ alkoxy,  $C_1$ - $C_3$ haloalkoxy, cyano or nitro;

$A_1$  is  $-C(R_{112}R_{113})-$  or  $-NR_{114}-$ ;

$A_2$  is  $-C(R_{115}R_{116})_m-$ ,  $-C(=O)-$ ,  $-O-$ ,  $-NR_{117}-$  or  $-S(O)_q-$ ;

$A_3$  is  $-C(R_{118}R_{119})-$  or  $-NR_{120}-$ ;

with the proviso that  $A_2$  is other than  $-O-$  or  $-S(O)_q-$  when  $A_1$  is  $-NR_{114}-$  and/or  $A_3$  is  $-NR_{120}-$ ;

$R_{112}$  and  $R_{118}$  are each independently of the other hydrogen,  $C_1$ - $C_4$ alkyl,  $C_2$ - $C_4$ alkenyl,  $C_2$ - $C_4$ alkynyl,  $C_1$ - $C_4$ alkylthio,  $C_1$ - $C_4$ alkylsulfinyl,  $C_1$ - $C_4$ alkylsulfonyl,  $C_1$ - $C_4$ alkoxycarbonyl, hydroxy,  $C_1$ - $C_4$ alkoxy,  $C_3$ - $C_4$ alkenyloxy,  $C_3$ - $C_4$ alkynyloxy, hydroxy- $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ alkylsulfonyloxy- $C_1$ - $C_4$ alkyl, halogen, cyano or nitro;

$R_{113}$  and  $R_{119}$  are each independently of the other hydrogen,  $C_1$ - $C_4$ alkyl or  $C_1$ - $C_4$ alkylthio,  $C_1$ - $C_4$ alkylsulfinyl or  $C_1$ - $C_4$ alkylsulfonyl;

or  $R_{113}$  together with  $R_{112}$  and/or  $R_{119}$  together with  $R_{118}$  form a  $C_2$ - $C_5$ alkylene chain which may be interrupted by  $-O-$ ,  $-C(O)O-$  or by  $-S(O)_r-$ ;

$R_{114}$  and  $R_{120}$  are each independently of the other hydrogen,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_3$ - $C_4$ alkenyl,  $C_3$ - $C_4$ alkynyl or  $C_1$ - $C_4$ alkoxy;

$R_{115}$  is hydrogen, hydroxy,  $C_1$ - $C_4$ alkyl,  $C_1$ - $C_4$ haloalkyl,  $C_1$ - $C_3$ hydroxyalkyl,  $C_1$ - $C_4$ alkoxy- $C_1$ - $C_3$ alkyl,  $C_1$ - $C_4$ alkylthio- $C_1$ - $C_3$ alkyl,  $C_1$ - $C_4$ alkylcarbonyloxy- $C_1$ - $C_3$ alkyl,  $C_1$ - $C_4$ alkylsulfonyloxy- $C_1$ - $C_3$ alkyl, tosyloxy- $C_1$ - $C_3$ alkyl, di( $C_1$ - $C_4$ alkoxy) $C_1$ - $C_3$ alkyl,  $C_1$ - $C_4$ alkoxycarbonyl, formyl,  $C_3$ - $C_5$ oxacycloalkyl,  $C_3$ - $C_5$ thiacycloalkyl,  $C_3$ - $C_4$ dioxacycloalkyl,  $C_3$ - $C_4$ dithiacycloalkyl,  $C_3$ - $C_4$ oxathiacycloalkyl,  $C_1$ - $C_4$ alkoxyiminomethyl, cyano, carbamoyl,  $C_1$ - $C_4$ alkylaminocarbonyl or di( $C_1$ - $C_4$ alkyl)aminocarbonyl;

or R<sub>115</sub> together with R<sub>112</sub> or R<sub>113</sub> or R<sub>114</sub> or R<sub>116</sub> or R<sub>118</sub> or R<sub>119</sub> or R<sub>120</sub> or, when m is 2, also with a second R<sub>115</sub> form a C<sub>1</sub>-C<sub>4</sub>alkylene bridge;

R<sub>116</sub> is hydrogen, C<sub>1</sub>-C<sub>3</sub>alkyl or C<sub>1</sub>-C<sub>3</sub>haloalkyl;

R<sub>117</sub> is hydrogen, C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl or di-(C<sub>1</sub>-C<sub>4</sub>alkyl)aminocarbonyl;

m is 1 or 2; and

q and r are each independently of the other 0, 1 or 2;

and also to agronomically acceptable salts, tautomers, isomers and enantiomers of those compounds.

2. A compound of formula II



wherein R<sub>1</sub> and R<sub>2</sub> are as defined for formula I in claim 1 and Y is C<sub>1</sub>-C<sub>4</sub>alkoxy, benzyloxy, hydroxy, fluorine, chlorine, bromine, cyano or phenoxy which may be substituted by an electron-withdrawing group.

3. A herbicidal composition which, besides comprising formulation adjuvants, comprises a herbicidally effective amount of compound of formula I.

4. A method of controlling grasses and weeds in crops of useful plants, which comprises applying a herbicidally effective amount of a compound of formula I or of a composition comprising such a compound to the plants or the locus thereof.